

## **REMARKS**

### **Status of the Claims:**

Claims 1-8 and 10-13 are currently pending in this application. The independent claims are claims 1 and 7. Claims 1 and 7 were objected to because of informalities. Claims 1-5 and 12 were rejected under 35 U.S.C. § 102(b) as being anticipated by Lazzara et al. U.S. Patent No. 4,988,297 ("Lazzara"). Claim 6 was rejected under 35 U.S.C. § 103(a) as being anticipated over Lazzara in view of Beaty et al. (5,476,383). Claims 7-11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Gerber (2,866,285) in view of Baum (4,681,542). Claim 13 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Lazzara. By this amendment, Applicant has amended claims 1 and 7 and no new matter has been added. Applicant respectfully submits that as amended, the within application is in condition for allowance.

### **Claim Objections:**

Claims 1 and 7 were objected to because of informalities. In particular, claim 1 recited "said axial implant abutment surface"; and "said prosthesis", while claim 7 recited "said prosthesis". By this amendment, Applicant has amended claims 1 and 7 by removing the objectionable language. Accordingly, the Examiner is requested to withdraw the outstanding objection as applied to amended claims 1 and 7.

### **Rejections under 35 U.S.C. § 102:**

Claims 1-5 and 12 were rejected under 35 U.S.C. § 102(b) as being anticipated by Lazzara. "A claim is anticipated only if each and every element as set forth in the claim is found either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 U.S.P.Q.2d (BNA) 1051, 1053 (Fed. Cir.

1987); See also M.P.E.P. § 2131. In this instance, Lazzara does not teach and or suggest each and every limitation of the independent claims as amended and thus cannot anticipate the present invention.

Lazzara discloses an alignment corrector for a dental implant, which provides for a parallelism corrector device 42 in place of the usual trans-tissue abutment and abutment screw 28. See Lazzara, col. 3, ll. 57–col. 4, ll. 1. The parallelism corrector device 42 comprises of a prefabricated base member 44, a prefabricated receiving member 46 and between them an after-fabricated body 48 which is affixed to both members, binding them together into a unitary component. See id. All three components must be combined prior to insertion into the jawbone.

The Examiner has cited Fig. 9 of the Lazzara reference as anticipatory prior art, which is representative of one embodiment where the pre-fabricated receiving member 46 is secured by an “Oso” anchor 110 featuring a post 112 extending on the new axis C-C for receiving a socket member 114. This anchor has an O-ring retainer comprising an annular groove around the post and an O-ring 118 in the socket member.” Lazzara, col. 5, ll. 63-68; See also Fig. 9. This receiving member 46 cannot be inserted directly into the jawbone but must necessarily be affixed to the parallelism corrector device 42 which is also attached to the pre-fabricated base member 44 located at the lower end of the parallelism corrector device 42 for insertion into the jawbone. Necessarily, the Oso anchor is also not prepared for ready insertion into the jawbone, but must first be affixed to the parallelism corrector device 42 which is secured to the jawbone by the pre-fabricated base member 44 annexed to the lower portion of the parallelism corrector device 42.

As amended, the implant abutment of claims 1 and 7 *having a threaded metal shaft which is to be received in a threaded bore formed in the dental implant* provides ready annexation to the jawbone. Support for this amendment is found in the specifications and the drawings, for

example at page 4, ll. 1-2; and ll. 13-14. In contrast, the Lazzara reference teaches away from the simplicity and ease of a unitary dental implant abutment *having a threaded metal shaft which is to be received in a threaded bore formed in the dental implant* as in the present invention. See Lazzara, col. 3, ll. 60-63 (“Before fitting a prosthesis to the first implant 10 the prosthodontist will seek to provide for that implant a receiving bore 40 on an axis C-C which is parallel to the axis A-A of the second implant. For this purpose, the invention provides a parallelism corrector device 42, in place of the usual trans-tissue abutment 18 and abutment screw 28, for example.”) (emphasis added).

In the present invention, the implant abutment 26, 26' comprises of an O-ring 41 having a cross-sectional diameter substantially greater than the depth of said groove 40 such that an outer portion of said O-ring 41 projects from an outer axial surface of said implant abutment. This implant abutment with an O-ring groove and a threaded metal shaft comprising of a unitary device as seen in Figs. 1 & 2 is directly implanted into the jawbone into a threaded bore. This is precisely the “usual trans-tissue and abutment screw” arrangement that the Lazzara reference teaches away from. This design facilitates easy removal for hygienic and maintenance purposes as the prosthesis is readily removed for cleaning yet resilient enough to survive multiple removals and still maintain its effectiveness.

The Lazzara reference does not teach or disclose a unitary implant abutment but rather a parallelism corrector comprising of three separate and distinct parts (the parallelism corrector device 42, the receiving member 46 and the pre-fabricated base member 44). The Oso anchor of the receiving member 46 identified by the Examiner as anticipating this invention cannot exist in isolation of the parallelism corrector device 42, and the pre-fabricated base member 44. Clearly, Figs. 9-11 of the Lazzara reference do not teach or suggest the invention as disclosed by the

amended independent claims of the within application. The device disclosed is Lazzara is so distinct from the dental prosthesis revealed in independent claims 1 and 7 that it could not have anticipated the claimed invention.

Therefore, Applicant respectfully submits that amended claims 1 and 7 are patentable over the cited reference for at least these reasons. Accordingly, dependent claims 1-6 and 12-13 which depend from independent claim 1, and claims 8, 10 & 11 which depend from independent claim 7 are also in condition for allowance.

**Rejections under 35 U.S.C. § 103:**

Claim 6 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Lazzara in view of Beaty. Claims 7-11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Gerber in view of Baum. Claim 13 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Lazzara. A prima facie case establishing obviousness requires that (1) there must be some suggestions or instructions to modify the references or to combine the teachings; (2) a reasonable expectation of success and (3) the prior art references must teach or suggest all the claim limitations. See MPEP §2143. A prima facie case of obviousness cannot be established based on the references cited.

As to claim 6, a prima facie case of obviousness has not been established because there would be no motivation to combine the references cited. The Lazzara reference discloses an alignment corrector for dental implant which comprises of three separate and distinct components (the parallelism corrector device 42, the receiving member 46 and the pre-fabricated base member 44). The Beaty reference discloses a dental restoration on artificial fixtures which provides for a second stage healing abutment for forming and preserving in the mucosa above a dental implant a transmucosal opening large enough to receive an artificial tooth that replicates

the natural tooth being restored. Here, the references in combination do not teach or suggest all the claim limitations as amended. As previously discussed, the Lazzara reference teaches away from the simplicity and ease of a unitary dental implant abutment *having a threaded metal shaft which is to be received in a threaded bore formed in the dental implant* as in the present invention. See Lazzara, col. 3, ll. 60-63 ("For this purpose, the invention provides a parallelism corrector device 42, in place of the usual trans-tissue abutment 18 and abutment screw 28, for example."). In the event the reference is teaching away from the invention, there can be no motivation to combine the Lazzara reference with the Beaty reference.

Further, neither Lazzara nor Beaty disclose the invention as recited in independent claim 1 from which claim 6 depends and which is characterized by a dental prosthesis having an implant abutment *having a threaded metal shaft which is to be received in a threaded bore formed in the dental implant* with an endless O-ring groove formed about the outer axial surface and an appliance having a retainer cavity including a retainer surface, there being a complimentary groove in said retainer surface shaped to closely match and receive said outer portion of the O-ring. Since neither Lazzara nor Beaty teach or suggest all the claim limitations as combined then a prima facie case of obviousness cannot be established. Therefore, the cited references cannot render the present invention obvious. Thus, claim 6 which depends from independent claim 1 is patentable over the cited art.

Similarly, in combination the references of Gerber and Baum do not disclose all the claim limitations as recited in claims 7,8, 10 & 11. Gerber discloses a device for releasably mounting an artificial tooth or the like which provides for a snap ring located within an annular groove. "This snap ring 8 is formed by a springy member which extends almost completely along a circle, the free ends of the member being located closely adjacent to each other." Gerber, col. 2,

11. 35-38. The snap ring introduces an additional complexity to the removable dental implant appliance mounting which the present invention is trying to avoid. Further, the Gerber reference discloses a gingival insertion of the releasable mounting to the root cap 2a. See Fig. 1.

Likewise, Baum discloses a retention system for dental prosthesis including a coping mounted to an abutment tooth and having an endless o-ring groove formed about the outer axial surface of the coping which is substantially different from the present invention. The mounting appliance of Baum requires crown preparation of the underlying abutment tooth. See Baum, col. 2, ll. 49-50; See also Fig. 2. "The coping 20 is then cemented by means of layer 28 of a suitable dental adhesive which securely bonds the coping to the abutment 10." Baum, col. 4, ll.3-5. As Figs. 2 & 3 disclose, said coping is to be cemented gingivally.

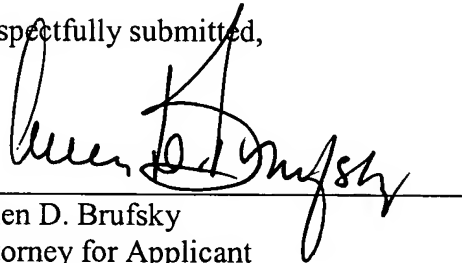
Neither Gerber nor Baum disclose, teach or suggest an implant abutment *having a threaded metal shaft which is to be received in a threaded bore formed in the dental implant* to be inserted subgingivally in the jawbone as recited in the amended claim 7. The process of securing the dental implant to the jawbone is patently distinct from that disclosed in either the Gerber or Baum references. The present invention uses a threaded metal shaft for easy insertion and/or removal into the jawbone. Since neither Gerber nor Baum teach or suggest such an arrangement there would be no suggestions or instructions to modify or to combine the references. Accordingly, the prior art references fail to teach or suggest all the claim limitations of amended independent claim 7. Therefore, claims 8, 10 & 11 which depend from independent claim 7 are therefore patentable over the cited art.

Finally, claim 13 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Lazzara. "Claims in dependent form shall be construed to include all the limitations of the claim incorporated by reference into the dependent claim." MPEP § 608.1(n). Claim 13 which

depends from dependent claim 4, which depends from claim 3, which depends from claim 2, which depends from independent claim 1, shall be construed to include all the limitations of the claims incorporated by reference. Thus, as amended, independent claim 1 which now recites an implant abutment *having a threaded metal shaft which is to be received in a threaded bore formed in the dental implant* is incorporated by reference into claim 13. As previously argued and discussed above, the Lazzara patent teaches away from the usual trans-tissue abutment 18 and abutment screw 28 as recited in the present invention. Thus, the Lazzara reference cannot be considered as disclosing the invention and rendering the present invention obvious. Accordingly, dependent claim 13 is patentable over the cited reference.

Applicant believes that no fee is required for the filing of this Amendment. However, the Commissioner is hereby authorized to charge any such fees, or credit any overpayment, to the undersigned attorney's Deposit Account No. 50181.

Respectfully submitted,



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